

Remarks/Arguments

This Amendment is being filed as part of a Request for Continued Examination and in response to an Advisory Action mailed January 23, 2004. Claim 1 remains in the application. Re-examination and reconsideration are requested.

Claim 1 has been amended to emphasize the use of a polymeric skin layer made of thermoplastic or thermoset material. Support can be found at page 13, lines 12-23. In addition, claim 1 has been amended to recite that the switches are embedded in a polyurethane foam. Support can be found at page 12, lines 13-23.

In the Final Office Action dated September 30, 2003, claim 1 of the present application was rejected under 35 USC 103(a) as being unpatentable over Filion, et al. (United States Patent No. 5,952,360) in view of Filion, et al. (United States Patent No. 5,448,028) and in further view of Spanjer (United States Patent No. 4,654,290).

In the Advisory Action, mailed January 23, 2004, the Examiner entered Applicant's After-Final response filed January 2, 2004. Applicants thank the Examiner for this entry.

The Examiner submitted on page 4 of the Advisor Action that "it would have been obvious for one of ordinary skill to have provided a colored outer skin and have used a laser marking method as taught by Spanjer (United States Patent No. 4,654,290) as an alternative to the printing process of Filion, et al., (United States Patent No. 5,448,028) to form indicia in the process of Filion, et al. (United States Patent No. 5,952,630) because, Filion ('630) teaches marking of said outer skin layer and Spajer ('290) teaches that laser marking and printing are equivalent alternatives and also because, laser marking provides a clearer and more durable marking, while eliminating the extra processing step in the printing process of applying a clear coat over a printed mark".

The present application as amended herein is directed at a method of marking a polymer **skin layer** of thermoplastic or thermoset material for a vehicle interior panel

with a laser **to indicate the position or function of a switch**. The switch is embedded in a polyurethane foam layer of the panel beneath the skin. An area of the skin that overlies one or more switches has a laser beam projected on to its surface and the surface contacted by a laser beam changes color relative to an area not contacted by the laser beam, creating a marking in the outer surface of the skin which may be used to indicate the position or function of an underlying switch or switch array. See e.g., claim 1.

Filion '630 is directed at a vehicle interior trim panel electrical switch assembly comprising a plurality of low-profile force sensitive variable resistance resistor sensors embedded in a foam layer of a door armrest. Indicia may **only be printed** on the continuous outer surface, or the flexible skin may comprise a **raised area** in overlying relationship to the sensors. Filion, et al. United States Patent No. 5,448,028 is directed at a pressure activated modular switch positioned between a substrate and a flexible outer skin in a vehicle soft interior trim panel and a **depressed or raised area** in the flexible skin adjacent to the outer portion of the switch. Additional independent claims are directed at indicia **printed** on the outside face surface of the flexible skin for indicating location of the switch.

That much being the case, Filion '630 and/or Filion '028 do not teach or suggest anything regarding the advantages, desirability, convenience or even hint at the opportunity to successfully project a laser beam to an outer skin surface in an area that overlies a switch (embedded in foam).

On that note, it is not at all clear to Applicants that the combination as suggested by the Examiner, that one of ordinary skill in the art would look beyond Filion to do something other than print, has been properly established. Or, stated another way, since Filion does not suggest anything regarding printing in any manner other than simple "printing", the suggestion that one skilled in the art would substitute Filion's printing with a completely different method (laser scoring of the surface) remains unclear to

Applicants.

Turning then to Spanjer (United States Patent No. 4,654,2990), this reference is directed at a device for marking by radiation a **covering means, or encapsulation means**, comprising a compound **formed from a plastic resin** and a coloring material wherein said coloring material comprises titanium dioxide in the range of 1%-5% by weight. The field of the invention includes **markable plastic encapsulation for electronic devices and improved laser marked electronic devices**, say with **alpha-numeric codes for identification purposes**.

The Spanjer reference discloses and claims “covering means **coating** a portion of said internal assembly” (claim 1) and “encapsulation means over a portion of said internal assembly” (claim 4). In the Specification of the ‘290 patent at column 3, lines 44-54, the coating means or encapsulation means are further expanded upon to include “transfer molding, injection molding or potting” which are “well known in the art”.

In the Advisory Action of January 23, 2004, the Examiner emphasized that it was his view the teachings of Spanjer stood for the broad proposition that laser marking could be viewed as a replacement for printing. Again, as noted above, Applicants respectfully disagree. Printing, of course, is simply transferring ink or some other dye on a surface. Laser marking, as claimed herein, and by complete contrast, projects a laser onto the surface and the surface is configured such that it changes color. Indeed, if the Examiner believes that one skilled in the art would consider “laser marking as an equivalent to printing”, it would suggest that at some future point in time, this very document would be exposed to a laser and undergo a color change, in order to create text. While that may be so, at the present time, a laser marked document of this proportion does not strike Applicants’ as obvious.

Furthermore, in the present application, the material which contacts the electrical device (switch), and which amounts to polyurethane foam, is not itself marked nor need it contain 1%-5% TiO₂. Rather, a flexible polymer skin layer (cast, sprayed, blowmolded or thermoformed) overlies the encapsulating or coating media (urethane foam) and the skin layer surface may be marked by the application of a laser beam. Again, this is contrary to all of the references cited, either alone or in combination.

Accordingly, the three cited references, United States Patent Nos. 5,952,630 (newly cited) and 5,448,028 (newly cited); and 4,654,290, separately or in combination do not teach or suggest a method of marking a polymeric skin layer of thermoplastic or thermoset material with a laser to indicate the position or function of a switch located beneath the skin layer, the switch embedded in a polyurethane foam layer and the skin formed by casting, spray coating, blow molding or thermoforming, wherein a vehicle interior trim panel comprises a substrate, foam layer, and said skin layer.

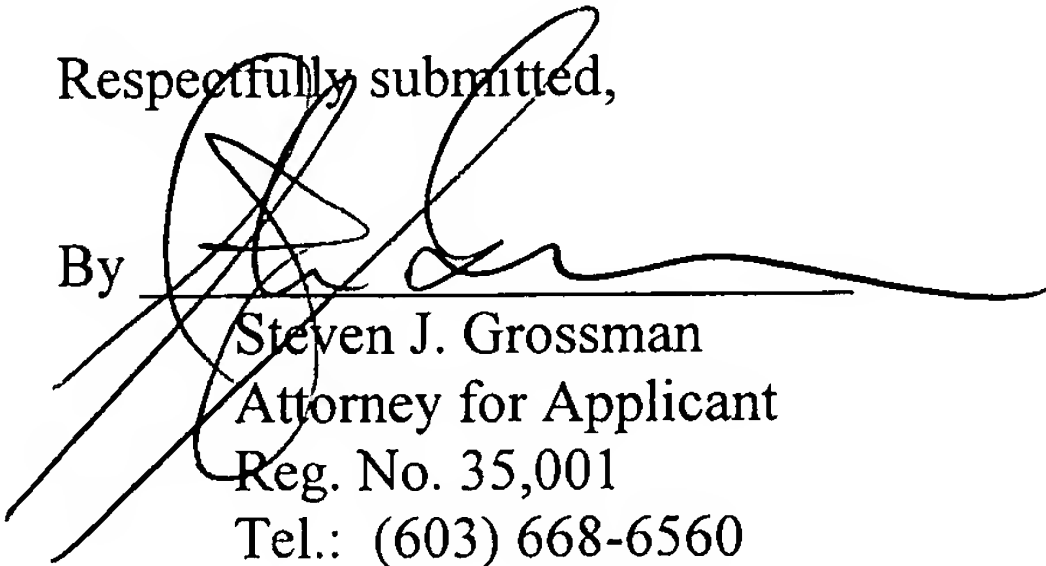
In consideration of the remarks hereinabove, Applicants respectfully submit that all claims currently pending in the application are believed to be in condition for allowance. Re-examination and reconsideration is requested. Allowance at an early date is respectfully solicited.

In the event the Examiner deems personal contact is necessary, please contact the undersigned attorney at (603) 668-6560.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 50-2121.

Respectfully submitted,

By



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service First Class Mail in an envelope addressed to: **Mail Stop RCE**, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on March 30, 2004, 2004, at Manchester, New Hampshire.

By Carol McClelland
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